07-28-06

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

INVENTOR: Dan Kikinis
CASE: P1544D1
SERIAL NO.: 09/911,945   **GROUP ART UNIT:** 2145
FILED: 07/23/2001   **EXAMINER:** Winder, Patrice L
SUBJECT: Enhanced Integrated Data Delivery System

PARTY IN INTEREST: All inventions in the disclosure in the present case are assigned to or assignable to: Lextron, Inc.

Commissioner for Patents
PO Box 1450
Alexandria, Va 22313-1450

Dear Sir:

APPEAL BRIEF

1.0   Real Party in Interest

The real party in interest is Lextron, Inc.

2.0   Related Appeals and Interferences

This is an appeal from the Office Action of the Examiner dated May 05, 2006, rejecting claims 8-10, 13 and 14, the only pending claims in the application. There are no related appeals of the claims in this case or interferences in the instant case.

3.0   Status of the Claims

Following is the status of all claims in the instant case:

8. Rejected - appealed in this brief; independent.
9. Rejected - appealed in this brief; dependent.
10. Rejected - appealed in this brief; dependent.
13. Rejected - appealed in this brief; independent.
14. Rejected - appealed in this brief; dependent.

4.0   Status of Amendments

No amendments have been filed subsequent to the rejection of claims 8, 9, 10, 13 and 14, the subjects of this appeal.

5.0   Summary of the Claimed Subject Matter

Following is a concise explanation of the subject matter defined in each of the two

standing independent claims including their dependent claims.

5.1 Independent system claim 8

8. A broadband data transmission system (pg. 8, lines 8-9) comprising:

a high priority queue (Fig. 2, 67; pg. 10 lines 1-7) reserved for data entities requiring that data entities be transmitted in a successive fashion at or above a minimum rate to insure no interruptions;

a lower priority data entity queue (Fig. 2, 69); and

control routines (pg. 8, lines 5-9; pg. 8, line 22) adapted for dividing large data entities in the lower priority queue into multiple smaller data entities of a size that may be interspersed with the transmission of data entities from the high priority queue without causing the rate of transmission of the high priority entities to fall below the minimum rate (pg. 13, line 11 to pg. 14, line 2).

In summary, the above claim provides a system which inserts and transmits data of a lower priority interspersed among data packets of higher priority data which must be transmitted at a constant rate to insure that degradation of the higher priority data not occur.

5.2 dependent claim 9.

9. (Previously presented) The broadband data transmission system of claim 8 wherein the transmission system comprises a satellite transmission system (pg. 6, lines 1-4).

5.3 dependent claim 10.

10. (Original) The broadband data transmission system of claim 8 wherein, upon dividing a large data entity into multiple smaller data entities for transmission, the control routines prepare a division key for transmission to a user, the division key adapted to aid in reassembling the multiple data entities back into the undivided larger

data entity (pg. 14, lines 3-10).

Claim 10 provides for a division key enabling the data receiving user to reassemble the data from the lower priority queue of claim 8, after it has been divided into smaller data entities and sent interspersed in the higher priority data and received by the user.

5.4 independent method claim 13.

13. (Previously presented) In a broadband data transmission system (pg. 8, lines 8-9) having a high priority queue reserved for first data entities requiring that the first data entities be transmitted in a successive fashion at or above a minimum rate (pg. 13, lines 11-24,) a method for transmitting a second data entity comprising steps of:

(a) dividing the second data entity into multiple portions, each portion small enough to ensure that it may be transmitted interspersed with first data entities without violating the minimum rate for the first data entities (pg. 13, line 25 to pg. 14, line 2); and

(b) transmitting the divided portions of the second data entity interspersed with transmission of first data entities, without causing interruption in transmission of the first data entities.

In summary, the method of claim 13 provides a step for dividing data entities from a lower priority queue into a smaller size so they may be interspersed and transmitted in the second step among data entities being transmitted at a constant rate from a higher priority queue in a manner as to not interrupt the rate of transmission from the higher priority queue.

5.5 dependent claim 14.

14. (Original) The method of claim 13 further comprising a step for preparing a division key with information about the facts of division of the second entity, and a

step for causing the division key to be transmitted to a user (pg. 14, lines 3-10).

Claim 14 provides for a division key enabling the data receiving user to reassemble the data from the lower priority queue of claim 8, after it has been divided into smaller data entities and sent interspersed in the higher priority data and received by the user.

6.0   Grounds of Rejection to be Reviewed on Appeal

Claims 8 and 13 are rejected on the merits under 35 U.S.C. 102(e) as being anticipated by Mendelson et al (USPN 5,754,783) hereinafter Mendelson. Additionally, dependent claims 10 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mendelson in view of Liebowitz et al. (US 5,812,545) hereinafter Liebowitz.

7.0   Argument

Following is a presentation of arguments against the rejection put forth by the Examiner.

7.1   35 U.S.C. 102 against claims 8 and 13.

The Examiner's Arguments:

The Examiner provides the art of Mendelson to teach independent claim 8 in its entirety and method claim 13. The Examiner states that Mendelson taught a broadband data transmission system (abstract) comprising:

a high priority queue reserved for data entities requiring that data entities be transmitted in a successive fashion at or above a minimum rate to insure no interruptions (column 2, lines 50-53, 63-67, column 6, lines 50-54);

a lower priority data entity queue (column 6, lines 50-54); and

control routines adapted for dividing large data entities in the lower priority queue into multiple smaller data entities of a size that may be interspersed with the transmission

of data entities from the high priority queue without causing the rate of transmission of the high priority entities to fall below the minimum rate (column 6, lines 23-26, column 8, lines 1-19).

Regarding dependent claims 10 and 14, the Examiner argues that Mendelson taught upon dividing a large data entity into multiple smaller data entities for transmission, the control routines enable reassembling the multiple data entities back into the undivided larger data entity (column 1, lines 37-38, column 2, lines 12-15).

The Examiner continues that Mendelson does not specifically teach preparing a division key for transmission to a user, the division key adapted to aid in reassembling the multiple data entities back into the undivided larger data entity. However, he states that Liebowitz taught preparing a division key for transmission to a user, the division key adapted to aid in reassembling the multiple data entities back into the undivided larger data entity (column 4, lines 58-63). So the Examiner's argument is that it would have been obvious to one of ordinary skill in the art at the time the invention was made that incorporating Liebowitz's division key in Mendelson's system for interleaving secondary data would have increased system robustness. The motivation would have been to reduce the complexity associated with decoding the transmitted stream.

Appellant's response:

Firstly appellant points out the burden placed on the applicant when an Examiner rejects claims merely citing page and line numbers with no added comment actually relating the cited teaching with applicant's claim limitations. Commonly the teachings do not relate exactly, requiring at least some explanation from the Examiner explaining why he/she believes the teachings are related. The Examiner responds to the system claim, 8, alone when referencing Mendelson and does not consider the method claim and steps provided in appellant's invention which should be considered in the order provided when presenting a proper rejection of anticipation.

Appellant argues that Mendelson fails to teach a system for transmitting packets on a broadband network, as claimed. Mendelson teaches a system for formatting an

MPEG video stream prior to transmission on the network. Mendelson teaches a system for formatting a transport stream 200 with a compression engine, to be delivered over network 130. Appellant's invention is not limited by software and takes place at the level of actual packet transmission on the network, not inside the compression step, as in Mendelson.

Appellant argues that Mendelson does not deal with the problem of the need to send additional real data to a user interspersed in a broadband transmission requiring minimum bandwidth so transmission is not interrupted. Mendelson teaches padding a transmission stream created with an MPEG compression software in order to meet minimum bandwidth in a constant bit rate (CBR) stream. A standard prior art CBR encoded MPEG transport stream includes packets filled with padding bits. The padding packets compensate for differences in compression deficiencies for various portions of the program (col. 6, lines 8-17). In Mendelson's invention, the padding packets are filtered out and replaced with content of a limited size and type related to the video content (Figs 1 and 3). In the event that content is not available to fill the space left from removing padding packets, additional padding packets are provided instead. In contrast, appellant's invention teaches dividing the second data entity into multiple portions, each portion small enough to ensure that it may be transmitted interspersed with first data entities without violating the minimum rate for the first data entities. These teachings of Mendelson do not read on appellant's invention, as claimed, nor does Mendelson's invention accomplish the same purpose.

Mendelson filters out the padding packets from the incoming MPEG video stream (Fig. 4) and puts the hard content in primary content buffer 412, and generates content to replace the padding packets which is placed in secondary content buffer 414. The secondary content is then interleaved in a linear manner into a data stream generated from the primary content buffer 412 in order to maintain the constant bit rate. The relative rate of insertion is periodically adjusted for each PCR (program clock reference) detected. For example, two bytes of secondary content needs to be supplied for each four bytes of primary content to maintain the constant bit rate 604. Appellant points out that the PCR's

are determined when receiving and filtering content from original MPEG received, and must be strictly adhered to when formatting for secondary content. Mendelson does not resize data packets from a lower priority queue to insert in a data stream from a higher priority queue in order to send needed data to a user receiving the data stream from the higher priority queue.

Appellant describes in the background portion of the specification that the present invention is an alternative to compression because compression of files is sometimes used as a technique to enable faster download times, but this expedient requires the user to have the appropriate software to decompress that particular file type. Often different software applications must be purchased by the user in order to decompress differing file types and so on. Many of these improvements cost the user in terms of the money and time spent to install and operate them.

Alternatively, appellant teaches a system which transmits autonomous packets of data resized to a specific size available in between transmission bursts of time sensitive data (video) in a manner as to not disrupt the transmission of the time sensitive data. In appellant's invention any type of data of any size can be sent because it is not inserted within video content packets, as in Mendelson.

Appellant argues that Mendelson is limited as to type of data and the size is restricted to the size of the padding packets as originally received in the MPEG. Further, appellant argues that the secondary content cannot be autonomous from the primary content because Mendelson does not teach a facility at the receiver's end for filtering out the secondary content. In Mendelson the secondary content must be video related text or a stationary graphic which is viewed along with the video stream at the user's end.

Appellant respectfully disagrees with the Examiner that Mendelson teaches dividing large data entities in the lower priority queue into multiple smaller data entities of a size that may be interspersed with the transmission of data entities from the high priority queue without causing the rate of transmission of the high priority entities to fall below the minimum rate. The size of packets in Mendelson is dictated by the detected PCRs upon receiving MPEG content from providers prior to resending. Mendelson

actually pads packets containing video content and does not resize existing packets to fit in the satellite transmission, as claimed.

Appellant teaches a system having a satellite link capable of sending data at 20 Mbps. A file of 80 Mb arrives at server 29, and the APPP driver determines the best route is the satellite path. Now assume that queue 67 is reserved for video, and to provide uninterrupted video at the user's PC, a packet must be sent every fraction of a second. If the 80 Mb file is queued in queue 69, when it is sent, it will tie up the satellite transmission for about four seconds. Assuming packets need to be sent during this interim from queue 67 for video (or any other type of real-time data stream) the four second transmission of a single packet will cause an interruption in the video stream at the user's end.

In an embodiment of the invention, packets of a size large enough to cause such an interruption as that described above are divided into packets small enough to be sent in between bursts from queue 67, so the larger file may be transmitted without disrupting the video stream. The size to cause such a division and the dividing factor will be determined by such factors as the capacity of the satellite link and the time that may be available for transmission between video packet transmissions.

Appellant argues that the art of Mendelson can never send a large file in need of resizing because of the PCR limitations of the original received MPEG video stream only allows secondary data of a size equaling the difference between VBR and CBR, and packets are created and generated for this specific size, existing packets are not resized.

Regarding the 103 rejection of claims 10 and 14, appellant disagrees with the Examiner's combining of Mendelson and Liebowitz. Appellant's specification clearly recites that APPP driver 59 performs an additional function of slicing large data packets and sending reduced-sized packets via the satellite path interspersed between transmission bursts of the time sensitive data. Therefore, the 103 rejection regarding Liebowitz fails as Mendelson does not resize packets, therefore needing a key. Appellant argues that there is absolutely no motivation in the art provided by the Examiner to provide a division key because there is no need in Mendelson to re-assemble resized

padding packets at the receiver's end. The reasoning for the combination cannot be made in this case without the Examiner's hindsight knowledge of the teachings of appellant's invention. Therefore, the obviousness rejection fails.

Appellant's invention provides a unique and valuable addition to the art of transmitting different data types in the same data steam which deserves acceptance to allowance by the board.

8.0   Claims Appendix

The claims involved in the appeal are:

1-7. (Canceled)

8. (Previously presented) A broadband data transmission system comprising:

        a high priority queue reserved for data entities requiring that data entities be transmitted in a successive fashion at or above a minimum rate to insure no interruptions;

        a lower priority data entity queue; and

control routines adapted for dividing large data entities in the lower priority queue into multiple smaller data entities of a size that may be interspersed with the transmission of data entities from the high priority queue without causing the rate of transmission of the high priority entities to fall below the minimum rate.

9. (Previously presented) The broadband data transmission system of claim 8 wherein the transmission system comprises a satellite transmission system.

10. (Original) The broadband data transmission system of claim 8 wherein, upon dividing a large data entity into multiple smaller data entities for transmission, the control routines prepare a division key for transmission to a user, the division key adapted to aid in reassembling the multiple data entities back into the undivided larger data entity.

11-12. (Canceled)

13. (Previously presented) In a broadband data transmission system having a high priority queue reserved for first data entities requiring that the first data entities be transmitted in a successive fashion at or above a minimum rate, a method for transmitting a second data entity comprising steps of:

(a) dividing the second data entity into multiple portions, each portion small enough to ensure that it may be transmitted interspersed with first data entities without violating the minimum rate for the first data entities; and

(b) transmitting the divided portions of the second data entity interspersed with transmission of first data entities, without causing interruption in transmission of the first data entities.

14. (Original) The method of claim 13 further comprising a step for preparing a division key with information about the facts of division of the second entity, and a step for causing the division key to be transmitted to a user.

9.0   **Evidence Appendix**

No evidence other than the arguments and facts presented in this brief is provided.

10.0   **Related Proceedings Appendix**

No copies provided, because these claims have never been appealed.

Respectfully Submitted,
Dan Kikinis

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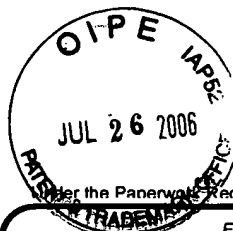
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Fees pursuant to the Consolidated Appropriations Act, 2005 (H.R. 4818).

FEE TRANSMITTAL
For FY 2005

[✓] Applicant claims small entity status. See 37 CFR 1.27

TOTAL AMOUNT OF PAYMENT	($)	250.00

Complete if Known	
Application Number	09/911,945
Filing Date	07/23/2001
First Named Inventor	Dan Kikinis
Examiner Name	Patrice L. Winder
Art Unit	2145
Attorney Docket No.	P1544D1

METHOD OF PAYMENT (check all that apply)

[✓] Check [ ] Credit Card [ ] Money Order [ ] None [ ] Other (please identify): _____

[✓] Deposit Account   Deposit Account Number: 50-0534   Deposit Account Name: Mark A. Boys

For the above-identified deposit account, the Director is hereby authorized to: (check all that apply)

[ ] Charge fee(s) indicated below   [ ] Charge fee(s) indicated below, **except for the filing fee**

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FEE CALCULATION

1. BASIC FILING, SEARCH, AND EXAMINATION FEES

	FILING FEES		SEARCH FEES		EXAMINATION FEES		
Application Type	**Fee ($)**	**Small Entity Fee ($)**	**Fee ($)**	**Small Entity Fee ($)**	**Fee ($)**	**Small Entity Fee ($)**	**Fees Paid ($)**
Utility	300	150	500	250	200	100	0
Design	200	100	100	50	130	65	0
Plant	200	100	300	150	160	80	0
Reissue	300	150	500	250	600	300	0
Provisional	200	100	0	0	0	0	0

2. EXCESS CLAIM FEES

Fee Description	Fee ($)	Small Entity Fee ($)
Each claim over 20 or, for Reissues, each claim over 20 and more than in the original patent	50	25
Each independent claim over 3 or, for Reissues, each independent claim more than in the original patent	200	100
Multiple dependent claims	360	180

Total Claims	Extra Claims	Fee ($)	Fee Paid ($)
0 - 20 or HP =	0	x 25 =	0

HP = highest number of total claims paid for, if greater than 20

Multiple Dependent Claims	
Fee ($)	Fee Paid ($)
0	0

Indep. Claims	Extra Claims	Fee ($)	Fee Paid ($)
0 - 3 or HP =	0	x 100 =	0

HP = highest number of independent claims paid for, if greater than 3

3. APPLICATION SIZE FEE

If the specification and drawings exceed 100 sheets of paper, the application size fee due is $250 ($125 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).

Total Sheets	Extra Sheets	Number of each additional 50 or fraction thereof	Fee ($)	Fee Paid ($)
_____ - 100 =	0	/ 50 = 0 (round up to a whole number) x	125	= 0

4. OTHER FEE(S)

	Fees Paid ($)
Non-English Specification, $130 fee (no small entity discount)	0
Other: Filing a brief in support of an appeal	250.00

SUBMITTED BY

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First Named Inventor: **Dan Kikinis**
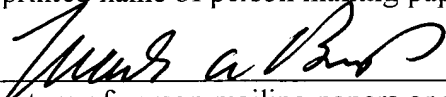Serial Number: **09/911,945**
Filing Date: **07/23/2001**
Title of Case: **Enhanced Integrated Data Delivery System**

I hereby certify that the attached papers are being deposited with the United States Postal Service "Express Mail Post Office to Addressee" service under 37 C.F.R. 1.10 on the date indicated above and addressed to the Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

1. Appeal Brief.
2. Fee transmittal.
3. Duplicate fee transmittal.
4. Check for fees in the amount of $250.00.
5. Certificate of express mailing.
6. Postcard listing contents.

Mark A. Boys

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